

Title: STEM Subject/Course: Introduction to Technology Education

Topic: Intro to Tech. Ed. Grade (s): 9-12 Designer (s) Josh Hall

Stage 1: Desired Results	
Core Standard(s): ITE.1.1 Examine the relationship between technology and other areas of study	
<p>Understandings: Students will understand that....</p> <p>Human needs determine products created in the designed world.</p> <p>Our designed world applies scientific, mathematical, and technological principles.</p>	
<p>Essential Question(s):</p> <p>How do human needs guide product development?</p> <p>How do math and the sciences relate to technology?</p>	
<p>Students will know....</p> <p>-The definition of technology</p> <p>-The difference between human needs and wants</p> <p>-the definition of “designed world”</p>	<p>Student will be able to</p> <p>- explain how math and science relate to product development</p> <p>- explain how human needs and wants effects product development</p>

Stage 2: Assessment Evidence			
What evidence will show that students understand?			
<input type="checkbox"/> Performance Task	<input checked="" type="checkbox"/> Project	<input checked="" type="checkbox"/> Quizzes	
<input type="checkbox"/> Tests	<input checked="" type="checkbox"/> Informal Observations	<input checked="" type="checkbox"/> Discussions	
<input type="checkbox"/> Interviews	<input type="checkbox"/> Self-Assessment	<input type="checkbox"/> Other	

Stage 3: Learning Plan

Motivation – Introduce and Explain

How will you help students know *where* they are headed and why? How will you *hook* students through engaging and thought-provoking experiences that point toward big ideas, essential questions, and performance tasks?

Overview Discussion: “Introduction of unit and of topics to be covered, this introduction will relate to the design world and the life of the students”

Assignment:” Bring written definitions of Technology from three generations”

Model (Teacher presentation):

What instruction is needed to *equip* students for final performance?

Module Activity:” Show them some sort of object from the designed world, and ask probing question to generate discussion on why that object was invented and what mathematical and scientific applications were used in the design and production of that object”

Guided and Independent Practice (Student Engagement):

What events can students *experience* to make the ideas and issues real? What learning activities will help student to *explore* the big ideas and essential questions?

Discussion:” What is technology?”

Graphic Organizer: “Students will cut out magazine pictures that represent science, math, and technology. Using these pictures the students will construct a graphic organizer showing how all of these things relate to each other.” OR “using clip art / internet images generate the graphic organizer electronically.”

Reflection/Assessment:

How will you cause students to *reflect* and *rethink* to dig deeper into core ideas? How will you guide students in *rehearsing*, *revising*, and *refining* their work based on feedback and self-assessment? How will students *exhibit* their understanding at their final performances and products? How will you guide them in *self-evaluation* to identify the strengths and weaknesses in their work and set future goals?

Final Assessment:” matching terms with definition.....technology, human needs, human wants, science, math, and design world” Second part of final assessment:” Written response to teacher prompts relating to a picture of an object.....ex. How was math/science used in the design of this object?.....Was this object invented based on a human need or want/explain?